

Remarks

The Office Action mailed January 14, 2005, has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1, 2, 4-8, and 10-19 are pending in this application, of which claims 1, 2, 4, 7, 8, 10, and 16-19 have been amended. Claims 13-19 have been withdrawn as directed to a non-elected invention. Claims 3 and 9 have been canceled. It is respectfully submitted that the pending claims recite allowable subject matter.

A restriction to either invention I, consisting of claims 1-12 drawn to a guide member, classified in class 439, subclass 378 or invention II, consisting of claims 13-18, drawn to a stacked circuit board assembly, classified in class 439, subclass 540.1 was imposed. In response, Applicants confirm the election with traverse to prosecute the invention of Group I, claims 1-12.

The requirement for election is traversed because the inventions set out by the claims in Groups I and II are clearly related. Applicants submit that a thorough search and examination of either Group would be relevant to the examination of the other Group and would not be a serious burden on the Examiner. Additionally, requirements for election are not mandatory under 35 U.S.C. 121. Accordingly, reconsideration of the election requirement is requested.

The rejection of Claims 1-3 and 7-9 under 35 U.S.C. § 102(b) as being anticipated by Briggs et al. (U.S. Patent 5,125,849) is respectfully traversed.

Briggs et al. describe a connector guide (30) including a body (31) having an aperture that receives a guide pin (26). In one embodiment, the body includes a counter bored aperture (40) including a groove (41) that aligns a liner (42) plugged into the aperture. The liner includes a central aperture (44, 52, 54) that may vary in size or may have a particular geometry to receive a similarly shaped pin. The connector guide is formed with different attachment features on the faces surrounding the aperture to allow different methods of attachment of the guide to a circuit board (12). One face includes a rounded projection (32) extending therefrom.

Claim 1 recites a guide module for connecting a primary circuit board and a secondary circuit board to a common backplane circuit board, the primary and secondary boards being in a tiered arrangement with both the primary and secondary circuit boards having interface connections on the backplane circuit board, the module including: “a body having opposed top and bottom surfaces, said bottom surface including a step configured to engage an edge of the primary circuit board, and wherein said body includes a front face between said top and bottom surfaces, said front face defining a receptacle for a guide pin on the backplane circuit board; and a locating feature located on one of said body top and bottom surfaces, said locating feature establishing a stack height for the secondary circuit board with respect to the primary circuit board”.

It is respectfully submitted that Briggs et al. neither describe nor suggest the apparatus recited in claim 1. Specifically, Briggs et al. neither describe nor suggest a guide module having a bottom surface including a step configured to engage an edge of a primary circuit board. Rather, Briggs et al. describe a connector guide formed with different attachment features on various faces to allow different methods of attachment of the guide to a circuit board.

Accordingly, claim 1 is submitted to be patentable over Briggs et al.

Claim 2 depends from independent claim 1. When the recitations of claim 2 are considered in combination with the recitations of claim 1, Applicants submit that dependent claim 2 likewise is patentable over Briggs et al.

Claim 3 is canceled.

Claim 7 recites a guide module for connecting a primary circuit board and a secondary circuit board to a common backplane circuit board, the primary and secondary boards being in a tiered arrangement with both said primary and secondary circuit boards having interface connections on the backplane circuit board, the module including: “a body including opposed top and bottom surfaces, said bottom surface including a step configured to engage an edge of the primary circuit board, and wherein said body includes a front face between said top and bottom

surfaces, said front face defining a receptacle for a guide pin on the backplane circuit board; and a locating feature located on one of said body top and bottom surfaces, said locating feature defining a stacking plane for the secondary circuit board when the secondary circuit board is coupled to the primary circuit board”.

It is respectfully submitted that Briggs et al. neither describe nor suggest the apparatus recited in claim 7. Specifically, Briggs et al. neither describe nor suggest a guide module having a bottom surface including a step configured to engage an edge of a primary circuit board. Rather, Briggs et al. describe a connector guide formed with different attachment features on various faces to allow different methods of attachment of the guide to a circuit board.

Accordingly, claim 7 is submitted to be patentable over Briggs et al.

Claim 8 depends from independent claim 7. When the recitations of claim 8 are considered in combination with the recitations of claim 7, Applicants submit that dependent claim 8 likewise is patentable over Briggs et al.

Claim 9 is canceled.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-3 and 7-9 be withdrawn.

The rejection of Claims 5, 6, 11, and 12 under 35 U.S.C. § 103 as being unpatentable over Briggs et al. in view of Speraw et al. (U.S. Patent No. 5,018,982) is respectfully traversed.

Briggs et al. is described above. Speraw et al. describe a standoff for stacking circuit boards. The standoff (40), which is fabricated from a metallic material, establishes spacing between the boards and provides electrical connection between adjacent boards. Each standoff is secured to a printed circuit board with a plastic retainer (30). The retainer is received in the body (41) of the standoff and has an end that forms a male connector (33) that is received in holes (14) in the circuit boards. The standoffs and retainers are secured together and mounted to a cabinet base (15) that includes supports (17), each of which has a threaded insert for receiving a screw

(19) which extends through the column of stacked standoffs. A screw cap (20) is disposed between the head of screw and the top most circuit board.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been obvious to one of ordinary skill in the art to modify Briggs et al. according to the teachings of Speraw et al. More specifically, as is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention absent some teaching, suggestion, or incentive supporting the combination. Neither Briggs et al. nor Speraw et al., alone or in combination, describe or suggest the claimed combination. Rather, the present Section 103 rejection appears to be based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Briggs et al. is cited for teaching a guide module having a rounded mounting projection. Speraw et al. is cited for teaching a standoff with a raised fitting. Since there is no teaching or suggestion in the cited art of the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants respectfully request that the present Section 103 rejection be withdrawn.

As the Federal Circuit has recognized: To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03.

In the present case, the raised fitting in Speraw et al, is a part of a retainer that is received in the body of the standoff. If combined with the guide module of Briggs et al., the retainer would block the aperture that receives the guide pin from the mating component. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). For at least the reasons stated above, Applicants respectfully submit that a prima facie case for obviousness has not been established and cannot be supported by the teachings of Briggs et al. and Speraw et al. Accordingly, Applicants respectfully request that the Section 103 rejection of Claims 5, 6, 11, and 12 be withdrawn.

Claims 5 and 6 depend from Claim 1 which recites a guide module for connecting a primary circuit board and a secondary circuit board to a common backplane circuit board, the primary and secondary boards being in a tiered arrangement with both the primary and secondary circuit boards having interface connections on the backplane circuit board, the module including: “a body having opposed top and bottom surfaces, said bottom surface including a step configured to engage an edge of the primary circuit board, and wherein said body includes a front face between said top and bottom surfaces, said front face defining a receptacle for a guide pin on the backplane circuit board; and a locating feature located on one of said body top and bottom surfaces, said locating feature establishing a stack height for the secondary circuit board with respect to the primary circuit board”.

It is respectfully submitted that neither Briggs et al. nor Speraw et al., considered alone or in combination, describe or suggest the apparatus recited in claim 1. Specifically, neither Briggs et al. nor Speraw et al., considered alone or in combination, describe nor suggest a guide module having a bottom surface including a step configured to engage an edge of a primary circuit board. Rather, Briggs et al. describe a connector guide formed with different attachment features on various faces to allow different methods of attachment of the guide to a circuit board and Speraw et al. describe a standoff having a raised fitting on a retainer.

Accordingly, claim 1 is submitted to be patentable over Briggs et al. in view of Speraw et al.

Claims 5 and 6 depend from independent claim 1. When the recitations of claims 5 and 6 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 5 and 6 likewise are patentable over Briggs et al. in view of Speraw et al.

Claims 11 and 12 depend from Claim 7 which recites a guide module for connecting a primary circuit board and a secondary circuit board to a common backplane circuit board, the primary and secondary boards being in a tiered arrangement with both said primary and secondary circuit boards having interface connections on the backplane circuit board, the module including: "a body including opposed top and bottom surfaces, said bottom surface including a step configured to engage an edge of the primary circuit board, and wherein said body includes a front face between said top and bottom surfaces, said front face defining a receptacle for a guide pin on the backplane circuit board; and a locating feature located on one of said body top and bottom surfaces, said locating feature defining a stacking plane for the secondary circuit board when the secondary circuit board is coupled to the primary circuit board".

It is respectfully submitted that neither Briggs et al. nor Speraw et al., considered alone or in combination, describe or suggest the apparatus recited in claim 7. Specifically, neither Briggs et al. nor Speraw et al., considered alone or in combination, describe or suggest a guide module having a bottom surface including a step configured to engage an edge of a primary circuit board. Rather, Briggs et al. describe a connector guide formed with different attachment features on various faces to allow different methods of attachment of the guide to a circuit board, and Speraw et al. describe a standoff having a raised fitting on a retainer.

Accordingly, claim 7 is submitted to be patentable over Briggs et al. in view of Speraw et al.

Claims 8 and 9 depend from independent claim 7. When the recitations of claims 8 and 9 are considered in combination with the recitations of claim 7, Applicants submit that dependent claims 8 and 9 likewise are patentable over Briggs et al. in view of Speraw et al.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 5, 6, 11, and 12 be withdrawn.

The rejection of Claims 4 and 10 under 35 U.S.C. § 103 as being unpatentable over Briggs et al. in view of Crowley (U.S. Patent No. 5,963,432) is respectfully traversed.

Briggs et al. is described above. Crowley describes a standoff for stacking circuit boards. In one embodiment, a snap lock standoff (200) includes a plurality of snap lock prongs (251, 252, 253 and 254) as a means of affixing a top most circuit board. The prongs have an outward tapered portion (290), an inward tapered portion (280), a lock ring portion (270), and a shaft portion (260) that connects the tapered portions and the lock ring portion to the top portion (120) of the standoff. A circuit board with holes can be placed over the tapered portions and pushed down over the lock ring portions causing the prongs to push inward. The prongs snap back into position after the circuit board passes over the lock ring portions so that the board is held in place by the underside of the lock ring portions.

Claim 4 depends from Claim 1 which recites a guide module for connecting a primary circuit board and a secondary circuit board to a common backplane circuit board, the primary and secondary boards being in a tiered arrangement with both the primary and secondary circuit boards having interface connections on the backplane circuit board, the module including: "a body having opposed top and bottom surfaces, said bottom surface including a step configured to engage an edge of the primary circuit board, and wherein said body includes a front face between said top and bottom surfaces, said front face defining a receptacle for a guide pin on the backplane circuit board; and a locating feature located on one of said body top and bottom surfaces, said locating feature establishing a stack height for the secondary circuit board with respect to the primary circuit board".

It is respectfully submitted that neither Briggs et al. nor Crowley, considered alone or in combination, describe or suggest the apparatus recited in claim 1. Specifically, neither Briggs et al. nor Crowley, considered alone or in combination, describe nor suggest a guide module having a bottom surface including a step configured to engage an edge of a primary circuit board. Rather, Briggs et al. describe a connector guide formed with different attachment features on various faces to allow different methods of attachment of the guide to a circuit board, and Crowley describes a standoff having snap lock prongs and a lock ring.

Accordingly, claim 1 is submitted to be patentable over Briggs et al. in view of Crowley.

Claim 4 depends from independent claim 1. When the recitations of claim 4 are considered in combination with the recitations of claim 1, Applicants submit that dependent claim 4 likewise is patentable over Briggs et al. in view of Crowley.

Claim 10 depends from Claim 7 which recites a guide module for connecting a primary circuit board and a secondary circuit board to a common backplane circuit board, the primary and secondary boards being in a tiered arrangement with both said primary and secondary circuit boards having interface connections on the backplane circuit board, the module including: "a body including opposed top and bottom surfaces, said bottom surface including a step configured to engage an edge of the primary circuit board, and wherein said body includes a front face between said top and bottom surfaces, said front face defining a receptacle for a guide pin on the backplane circuit board; and a locating feature located on one of said body top and bottom surfaces, said locating feature defining a stacking plane for the secondary circuit board when the secondary circuit board is coupled to the primary circuit board".

It is respectfully submitted that neither Briggs et al. nor Crowley, considered alone or in combination, describe or suggest the apparatus recited in claim 7. Specifically, neither Briggs et al. nor Crowley, considered alone or in combination, describe or suggest a guide module having a bottom surface including a step configured to engage an edge of a primary circuit board. Rather, Briggs et al. describe a connector guide formed with different attachment features on

various faces to allow different methods of attachment of the guide to a circuit board, and Crowley describes a standoff having snap lock prongs and a lock ring.

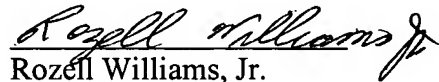
Accordingly, claim 7 is submitted to be patentable over Briggs et al. in view of Crowley.

Claim 10 depends from independent claim 7. When the recitations of claim 10 are considered in combination with the recitations of claim 7, Applicants submit that dependent claim 10 likewise is patentable over Briggs et al. in view of Crowley.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 4 and 10 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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